

Colorado Department of Transportation
Structure Inspection and Inventory Report (English Units)

Highway Number (ON) 5D: 470A 1

Mile Post (ON)11: 25.964 mi

Bridge Key: F-17-IE

Inspection Date: 8/22/2011

Sufficiency Rating: 84.0 Not Eligible

Rgn/Sectn 2E/2M:	68	Hist Signif 37:	5	UW Inspection Date 93B:	
Trans Region 2T:	02	Posting status 41:	A	SI Date 93C:	
County Code 3:	035	Service on/un 42A/B:	1 4	Bridge Cost 94:	\$ 0
DOUGLAS		Main Mat/Desgn 43A/B:	6 2	Roadway Cost 95:	\$ 0
Place Code 4:	45955	Appr Mat/Desgn 44A/B:	0 0	Total Cost 96:	\$ 0
LONE TREE		Main Spans Unit 45:	3	Year of Cost Estimate 97:	
Rte.(On/Under)5A:	1	Approach Spans 46:	0	Brdr Brdg Code/% 98A/B:	
Signing Prefix 5B:	3	Horiz Clr 47:	68.0 ft	Border Bridge Number 99:	
Level of Service 5C:	1	Max Span 48:	65.0 ft	Defense Highway 100:	1
Directional Suffix 5E:	0	Str Length 49:	172.0 ft	Parallel Structure 101:	N
Feature Intersected 6:		Curb Wdth L/R 50A/B:	0.0 ft 0.0 ft	Direction of Traffic 102:	1
RAMP TO I 25 SBND R		Width Curb to Curb 51:	68.0 ft	Temporary Structure 103:	
Facility Carried 7:		Width Out to Out 52:	71.5 ft	Highway System 104:	1
RAMP TO SH 470 ML		Deck Area:	12,303.1 sq. ft	Fed Lands Hiway 105:	0
Alias Str No.8A:		Min Clr Ovr Brdg 53:	99.99	Year Reconstructed 106:	1991
		Min Undrclr Ref 54A:	H	Deck Type 107:	1
Prll Str No. 8P		Min Undrclr 54B:	16.9 ft	Wearing Surface 108A:	6
		Min Lat Clmce Ref R 55A:	H	Membrane 108B:	2
Location 9:	328.05117409	Min Lat Undrclr R 55B:	6.8 ft	Deck Protection 108C:	1
SB ONRAMP N.OF C470 & I25		Min Lat Undrclr L 56:	4.41601035	Truck ADT 109:	5 %
Max Clr 10:	99.99	Deck 58:	7	Trk Net 110:	1
BaseHiway Net12:	0	Super 59:	7	Pier Protection 111:	#
IrsinvRout 13A:	0000000000	Sub 60:	7	NBIS Length 112:	Y
IrrsubRout No13B:	00	Channel/Protection 61:	N	Scour Critical 113:	N
Latitude 16:	39d 33' 29"	Culvert 62:	N	Scour Watch 113M:	
Longitude 17:	104d 52' 18"	Oprrtg Rtg Method 63:	5 No rating	Future ADT 114:	142,080
Range18A:	67 W	Operating Rating 64:	65.0	Year of Future ADT 115:	2028
Township18B:	67	Inv Rtg Method 65:	5	CDOT Str Type 120A:	CPGC
Section18C:	3	Inventory Rating 66:	41.0	CDOT Constr Type 120B:	31
Detour Length 19:	2.0 mi	Asph/Fill Thick 66T:	003 "in"	Inspection Indic 122A:	
Toll Facility 20:	3	Str. Evaluation 67:	7	Inspection Trip 122AA:	
Custodian 21:	1	Deck Geometry 68:	6	Scheduling Status 122B:	
Owner 22:	1	Undrclr Vert/Hor 69:	5	Maintenance Patrol 123:	30
Functional Class 26:	12	Posting 70:	5	Expansion Dev/Type124:	C
Year Built 27:	1983	Waterway Adequacy 7:	N	Brdg Rail Type/Mod 125A/B:	R 0
Lanes on 28A:	4	Approach Alignment 72:	8	Posting Trucks 129A/B/C:	0 0 0
Lanes Under 28B:	1	Type of Work 75A:		Str Rating Date 130:	6/11/1998
ADT 29:	88,800	Work Done By 75B:		Special Equip 133:	-1
Year of ADT 30:	2008	Length of Improvment 76:	0.0 ft	Vert Clr N/E 134A/B/C:	X 99.99 0.00
Design Load 31:	6	Insp Team Indicator 90B:	BLUE TEAM	Vert Clr S/W 135A/B/C:	S 16.92 16.92
Apr Rdwy Width 32:	68.0 ft	Inspector Name 90C:	BUTKOVICHJ	Vertical Clr Date:	10/2/2009
Median 33:	0	Frequency 91:	24 months	Weight Limit Color: 139:	0
Skew 34:	51.00 °	FC Frequency 92A:	-1	Str Billing Type:	U
Structure Flared 35:	1	UW Frequency 92B:	-1	Userkey 1 - System:	ONSY
Sfty Rail 36a/b/c/d:	1 1 1 1	SI Frequency 92C:	-1	Userkey 7-Update Indic:	
Rail ht36h:	34 "in"	FC Inspection Date 93A:			

Inspector Name: BUTKOVICHJ

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Element Inspection Report

Elm/En	Description	Units	Total Qty	% in 1	CS 1	% in 2	CS 2	% in 3	CS 3	% in 4	CS 4	% in 5	CS 5
14/4	P Conc Deck/AC Ovly	(SF)	12,298	0 %	0	100 %	12,298	0 %	0	0 %	0	0 %	0
109/4	P/S Conc Open Girder	(LF)	1,360	100 %	1,355	0 %	5	0 %	0	0 %	0	0 %	0
205/4	R/Conc Column	(EA)	16	100 %	16	0 %	0	0 %	0	0 %	0	0 %	0
215/4	R/Conc Abutment	(LF)	227	100 %	227	0 %	0	0 %	0	0 %	0	0 %	0
234/4	R/Conc Cap	(LF)	227	100 %	227	0 %	0	0 %	0	0 %	0	0 %	0
301/4	Pourable Joint Seal	(LF)	227	100 %	227	0 %	0	0 %	0	0 %	0	0 %	0
302/4	Compressn Joint Seal	(LF)	227	100 %	227	0 %	0	0 %	0	0 %	0	0 %	0
321/4	R/Conc Approach Slab	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
325/4	Slope Prot/Berms	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0
326/4	Bridge Wingwalls	(EA)	4	100 %	4	0 %	0	0 %	0	0 %	0	0 %	0
331/4	Conc Bridge Railing	(LF)	244	100 %	244	0 %	0	0 %	0	0 %	0	0 %	0
333/4	Other Bridge Railing	(LF)	100	100 %	100	0 %	0	0 %	0	0 %	0	0 %	0
340/4	Superstr Cnc Coating	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0
341/4	Substr Conc Coating	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0
359/4	Soffit Smart Flag	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0

Elem/Env	Description	Element Notes
14/4	P Conc Deck/AC Ovly	4 inches of asphalt. New overlay looks good, but does not goe all the way to the railing so it is rough there.
109/4	P/S Conc Open Girder	Few small nicks and patches in the top flange of Girder D (formerly an exterior girder). Girder 3E has several hairline cracks with efflor. in top flange near Abutment 4.
205/4	R/Conc Column	Good condition.
215/4	R/Conc Abutment	Few light vertical cracks, one with efflor. in Abutment 1. Some minor cracks along the embedded girder ends. The acute corner at Abutment 1 on left, has a broken corner just above the slope pavement. Two pieces of #4 rebar are protruding out of the abutment ledge at Abutment 4 in Bay E. Moderate vert. crack in Abutment 4 at Girder 3D.
234/4	R/Conc Cap	Good condition.
301/4	Pourable Joint Seal	Between approach slabs and deck endd. Asphalt covered.
302/4	Compressn Joint Seal	Seals are located between the approach slabs and the approach roadway. Covered with asphalt.
321/4	R/Conc Approach Slab	Covered with asphalt.
325/4	Slope Prot/Berms	Concrete paving on Abutment 1 slope, with 6 ft. - 7 ft. high retaining wall at toe. Some minor horiz. cracking.
326/4	Bridge Wingwalls	Few light vertical cracks, with some cracking in the cold joints.

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Elem/Env	Description	Element Notes
331/4	Conc Bridge Railing	Concrete Jersey barriers (Type R bridge rail) on both sides above Spans 1 & 3. Typical light vertical cracks spaced 3 to 6 feet apart. Light scale throughout the left rail. Several scrapes from snow plows.
333/4	Other Bridge Railing	5 Ft. high chainlink debris fence on top of Jersey barrier at both sides above Span 2. Typ. light vert. cracks in concrete portion, and some light scale.
340/4	Superstr Cnc Coating	On exterior girders, overhangs, and bridge rail. Peeling in spots on girders and rail.
341/4	Substr Conc Coating	On abutments, wingwalls, pier columns, and pier caps. Looks good.
359/4	Soffit Smart Flag	Some hairline to light transverse cracks with efflorescence (See 2003 SKETCH). Water stains from leaking around the utility box in Span 1.

Maintenance Activity Summary

MMS Activity	Description	Recommended	Status	Target Year	Est Cost
352.01	Cln & Wash	7/29/2003	-1	2013	300

Clean sand and debris from deck drains.

Bridge Notes

The center span is over the RTD Light Rail, which was not accessed in 2007, 2009, or 2011, but the girders, deck bottom, pier columns, and pier caps in Span 2 can all easily be seen from Spans 1 & 3.

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Inspection Notes

Time: 6:45 am	Temp: 70	Weather: Clear	Team Leader: AM
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Scope:

☒ NBI: ☒ Element: ☐ Underwater: ☐ Fracture Critical: ☐ Other: Type: Regular NBI

Inspector: BUTKOVICHJ

Inspection Team:

Inspection Date: 08/22/2011

Inspector

Inspector